

REMARKS/ARGUMENTS

Claims 7-10 and 14-20 are active. Claims 4-6 and 13 have been withdrawn from consideration. Claims 7-10 have been revised to refer to brain-derived neurotrophic factor also abbreviated as BDNF and have been directed to anorexia nervosa and bulimia nervosa. These eating disorders are disclosed at page 12, lines 20 *et seq.* of the specification and are also well-known in the art, for example, as described by the diagnostic standards of DSM-IV of the American Psychiatric Association (attached). New claim 14 tracks claim 7 and also finds support on page 7 of the specification. Claims 15-16 find support on page 6, line 39. Claims 17-19 find support in Example 1 starting at the bottom of page 12 of the specification. Claim 20 finds support in Example 2 on page 19 of the specification. Thus, the Applicants do not believe that any new matter has been introduced. Favorable consideration of this Amendment and allowance of this application are respectfully requested.

Restriction/Election

The Applicants previously elected with traverse **Group II**, claims 7-10, directed to methods of detection. The requirement has been made FINAL. The Applicants respectfully request that the claims of the nonelected group which depend from or otherwise include all the limitations of an allowed elected claim, be rejoined upon an indication of allowability for the elected claim, see MPEP 821.04.

Rejection—35 U.S.C. §112, first paragraph

Claims 7-10 were rejected under 35 U.S.C. 112, first paragraph, as lacking adequate written description. This rejection is moot in view of the amendments clarifying the claim language above and directing the claims to detection of anorexia nervosa and bulimia nervosa. Moreover, the level of BDNF in blood serum was measured by commercially

available BDNF assay kit as disclosed in the present specification, page 13, lines 19 et seq., and the increase/decrease of BDNF were determined by statistical analysis (ANOVA) with respect to the difference of the serum level of BDNF in the samples of three of the patients of anorexia nervosa, the patients of bulimia nervosa and the healthy subjects, which will be readily understood by any person skilled in the art. Results of these test are shown in the on page 15 of the specification. Accordingly, this rejection may now be withdrawn.

Rejection—35 U.S.C. §112, second paragraph

Claims 7-10 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. This rejection is moot in view of the amendments above.

Rejection—35 U.S.C. §103(a)

Claims 7-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barde, et al., U.S. Patent No. 5,180,820, in view of Kernie, et al., EMBO J. 19:1290 (“AW”). The Applicants respectfully traverse this rejection. Barde does not disclose detecting BDNF levels as an indicator or anorexia nervosa or bulimia nervosa. Kernie was applied as teaching that low levels of BDNF lead to features that “parallel the human condition of obesity” (OA, middle of page 5), that “administration of BDNF to the hypothalamus decreases weight” in mice, and that “reduction of endogenous BDNF levels in the hypothalamus can result in eating behavior disorders”. Kernie teaches away from an association between low levels of BDNF in serum and anorexia nervosa and bulimia nervosa, since it indicates that mice with one copy of the BDNF gene knocked out (“heterozygous mice”, page 12296, col. 2, 2nd full paragraph) tend toward obesity. Moreover, page 1298, 2nd col., lines 12-13, of Kernie further teach away from the invention by suggesting the possible correlation with BDNF mutation and human obesity.

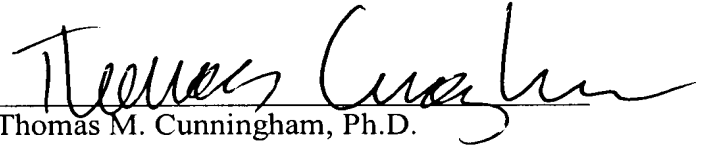
On the other hand, anorexia nervosa and bulimia nervosa to which the present claims are directed have no direct relation with obesity. Thus, neither Kernie, nor Barde suggest, nor can they provide a reasonable expectation of success for the present invention which correlates low levels of BDNF in human serum with anorexia nervosa and bulimia nervosa. Accordingly, the Applicants respectfully request the withdrawal of this rejection.

Conclusion

This application presents allowable subject matter and the Examiner is respectfully requested to pass it to issue. The Examiner is kindly invited to contact the undersigned should a further discussion of the issues or claims be helpful.

Respectfully submitted,

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